Steelcase Inc

Alabama Technology Network

Lean Process Improvements Reduce Throughput Times And Inventory At Steelcase

Client Profile:
Steelcase, Inc., headquartered in Grand Rapids, Michigan, is the world's largest manufacturer of office equipment. The company's Athens, Alabama facility, established in 1979, has approximately 460 employees.

Situation:
Steelcase's Athens facility wanted to improve its assembly process for Avenir office partition panels. Throughput time averaged 10 to 12 hours; the plant desired a lead time of only four hours. Steelcase also had excess work-in-process (WIP) building up both pre- and post-paint. Sixty racks were used to hold materials, which cluttered the workspace at an unnecessary cost. The distance workers had to walk from storage to assembly created considerable manufacturing waste. As a result, the company wasn't producing fast enough to meet demand rate. Steelcase contacted the Alabama Technology Network (ATN), a NIST MEP network affiliate, for assistance.

Solution:
ATN assessed the conditions on Steelcase's production floor and recommended a lean implementation plan designed to reduce waste and improve throughput. With the help of a team of Steelcase employees, ATN performed a kaizen event over the span of five days. During the event, the team documented the current process, analyzed wastes in the current process, formulated improvements to eliminate the waste, and designed a new process.
In Steelcase's existing process, all products ran through one of two shared paint lines. The new process dedicated one mini-paint line (previously used for rework) to the Avenir products. The ATN-led team moved the core steel supermarket closer to the paint line, dramatically reducing worker travel distance, and the workers did not hang the steel until it was ready to be painted. The team designed a 13-rack max system, reducing WIP. Ultimately, the process improvements at Steelcase resulted in increased availability of space, decreased throughput time to meet the company goal, and saved costs.

Results:
Reduced square footage required for assembly by 51.7 percent, from 13,863 to 6,695 feet.
Reduced travel from 3,490 feet to 1,100 feet, a 68.4 percent reduction.

Decreased throughput time to less than 2.5 hours, an 80 percent improvement. Decreased WIP by reducing use of 60 racks at a cost of $8,016 per day to 13 racks at a cost of only $1,408 per day.

Testimonial:
“The Alabama Technology Network did a great job coming up with this new system. The reduced WIP will lower throughput, allowing us to respond faster to customers, and it reduces the amount of inventory we keep in the plant. Everyone will win.”

Ray Kulmer, Steelcase Avenir Superintendent